

US PAT NO: 5,758,327 [IMAGE AVAILABLE] ANS: 1  
DATE ISSUED: May 26, 1998  
TITLE: Electronic requisition and authorization process  
INVENTOR: Ben D. Gardner, 1681 Hanchett Ave., San Jose, CA 95128  
Wilbert S. Folds, San Mateo, CA  
Nora L. Roberto, Livermore, CA  
APPL-NO: 08/551,434  
DATE FILED: Nov. 1, 1995  
US-CL-CURRENT: 705/26

**ABSTRACT:** A method of electronic requisition processing includes storing company-specific requisition rules and an electronic catalog on a central computer system located at a first site. The central computer system is linked to a number of companies by means of an external communications line, such as a telephone system-and-modem arrangement. A requester at one of the companies may identify one or more items to be ordered. In response to the requisition, the company with which the requestor is associated is determined, and the appropriate requisition rules for that company are implemented. If more than one item is identified, a requisition folder is formed in software to contain a number of requisitions. Also contained in the requisition folder are any required attachments, with each attachment being designated as being "internal" or "external" and as "confidential" or "non-confidential." The authorization process dictated by the requisition rules of the company are followed, with at least a portion of the process being executed electronically via the external communications line. If the purchase of items is authorized, an appropriate number of purchase orders are generated and are preferably transmitted to vendors electronically. The method isolates the companies from the vendors. In one embodiment, the payment process is also carried out in a manner that isolates the companies and the vendors. Vendors invoice the operators of the central computer system, who then invoice the companies.

26 MAY 1998 11:51:53 U.S. Patent & Trademark Office  
=> set pag scr;act t1/a;d 12 8 .finalreport;d 12 8 .view2  
SET COMMAND COMPLETED

P0001

L1           QUE PLU=ON REMOT##### OR CENTRAL#####  
L2           QUE PLU=ON ELECTRON#####  
L3           QUE PLU=ON L1 OR L2  
L4           QUE PLU=ON ORDER##### OR PURCHAS#####  
L5           QUE PLU=ON REQUISITION##### OR BUY#####  
L6           QUE PLU=ON L4 OR L5  
L7 ( 19612)SEA FILE=USPAT PLU=ON L3 (5A) L6  
L8           QUE PLU=ON VENDOR OR SUPPLY OR CATALOG#####  
L9 ( 19622)SEA FILE=USPAT PLU=ON L6 (5A) L8  
L10          QUE PLU=ON COMMUNICAT#####  
L11          QUE PLU=ON SEND##### OR RECEIV#####  
L12          QUE PLU=ON L10 OR L11  
L13 ( 41492)SEA FILE=USPAT PLU=ON L12 (5A) L6  
L14          QUE PLU=ON LINE OR LINK OR CHANNEL  
L15          QUE PLU=ON NET OR NETWORK OR LAN  
L16          QUE PLU=ON INTERNET OR INTRANET OR WAN  
L17          QUE PLU=ON L10 OR L14 OR L15 OR L16  
L18 ( 11173)SEA FILE=USPAT PLU=ON L13 (5A) L17  
L19 ( 365)SEA FILE=USPAT PLU=ON L1 (5A) L18  
L20          QUE PLU=ON VENDORS OR SUPPLIERS OR CATALOGS  
L21 ( 801)SEA FILE=USPAT PLU=ON L6 (5A) L20  
L22          20 SEA FILE=USPAT PLU=ON L7 (L) (L9 OR L21) (L) L19

US PAT NO:    4,897,867 [IMAGE AVAILABLE]           L22: 12 of 20

DATE ISSUED:   Jan. 30, 1990

TITLE:          Method of and an arrangement for forwarding a customer order

INVENTOR:       Robert W. Foster, Glen Ellyn, IL

                  Charles B. Hirschman, Naperville, IL

                  Marie L. Todd, Naperville, IL

APPL-NO:       07/170,561

DATE FILED:    Mar. 15, 1988

REL-US-DATA:    Continuation of Ser. No. 781,895, Sep. 30, 1985, abandoned.

US-CL-CURRENT: 379/93.12; 348/6, 13; 379/93.02, 93.14, 246; 455/4.2

US PAT NO:      5,305,199 [IMAGE AVAILABLE]           L22: 8 of 20

DATE ISSUED:    Apr. 19, 1994

TITLE:          Consumable supplies monitoring/ordering system for reprographic equipment

INVENTOR:       Martin F. LoBiondo, Penfield, NY

                  Paul A. Baiter, Huntsville, AL

APPL-NO:       07/967,475

DATE FILED:    Oct. 28, 1992

US-CL-CURRENT: 705/28; 347/19; 399/24

US PAT NO: 4,897,867 [IMAGE AVAILABLE] L22: 12 of 20  
DATE ISSUED: Jan. 30, 1990  
TITLE: Method of and an arrangement for forwarding a customer order  
US-CL-CURRENT: 379/93.12; 348/6, 13; 379/93.02, 93.14, 246; 455/4.2

**ABSTRACT:** A method and an arrangement are disclosed for forwarding a customer order received from a requesting customer line to a vendor data link. For use with a telecommunications switching system, the order entry arrangement includes a customer signal receiver for receiving customer signals from a requesting customer line and a processor for sending the orders received from the receiver to the vendor data link. The processor normally controls the operation of the switching network of the switching system but also sends received customer orders and the identity of the requesting line to a vendor data link in response to a customer entered order entry request code. Optional vendor identification information may be entered by the customer for selecting a desired vendor. Customer identification information may also be entered by the customer for billing and order security purposes. After the order is received, the order entry arrangement returns an order confirmation signal to the requesting line.

DETD(2) FIG. 1 depicts an illustrative embodiment of an order entry arrangement 131 for forwarding to a \*\*vendor\*\* data link a customer entered \*\*order\*\* received from a requesting telecommunications line. The order entry arrangement is integrated into a switching system 101 that serves a plurality of customer telecommunication lines, such as 150 and 151. The \*\*order\*\* entry arrangement includes a \*\*central\*\* processor 112 which advantageously controls a switching network comprising line and trunk link networks 110 and 111. The processor also. . . the identity of the requesting line from stored translations information and sends the derived line identity along with the customer \*\*order\*\* to the desired \*\*vendor\*\* equipment. Customer lines 150 and 151 are connected to respective telephones 102 and 103 at customer premises 104 and 105, respectively. In this illustrative embodiment, \*\*vendor\*\* equipment 100 transmits customer \*\*ordered\*\* cable television program selections to customer televisions 106 and 107 via well-known coaxial TV cables 152 and 153 and addressable. . .

DETD(3) A . . . cable TV vendor equipment 100 via dedicated data link 154. Additional customer entered identification that may be required by the \*\*vendor\*\* for billing and \*\*order\*\* security purposes is also sent to the \*\*vendor\*\* equipment along with the \*\*order\*\* and the identity of the requesting line. In response, the cable TV \*\*vendor\*\* equipment transmits the \*\*ordered\*\* program selection to the requesting customer's television at a designated time and charges the identified customer for the ordered program. . .

DETD(6) The . . . networks to establish paths and connections between lines, trunks, and service circuits in a well-known manner. As part of the \*\*order\*\* entry arrangement, the \*\*central\*\* processor collects customer entered \*\*order\*\* signals from the receivers in response to a customer entered order entry request signal and sends to a designated \*\*vendor\*\* data link the customer \*\*order\*\* and the identity of the requesting line derived from stored translations information. The central processor includes central control 118, call. . . lines and the directory numbers of calling and called lines as well as calling lines requesting to place

customer entered \*\*orders\*\* with a customer designated \*\*vendor\*\*. The call store memory also includes a number of well-known temporary call registers.

DETD(7) FIG. . . . entered signals such as an order entry request code and order information. The order data includes program selection data, optional \*\*vendor\*\* identification to forward the \*\*order\*\* to a designated \*\*vendor\*\* data link, and requesting customer identification that may be required by a \*\*vendor\*\* for billing and \*\*order\*\* security purposes. In addition, the specific data in the temporary call register includes the directory and equipment numbers of the. . .

DETD(8) The . . . order entry table that identifies, amongst other things, the designated data link and output channel to desired vendor equipment. The \*\*central\*\* processor accesses this \*\*order\*\* entry table with the received order entry request code and any customer entered vendor code using a well-known table look-up. . .

DETD(9) Program . . . the directory number of the called line. With respect to the order entry arrangement, the stored program instructions direct the \*\*central\*\* control to collect and \*\*send\*\* a customer entered \*\*order\*\* to a designated \*\*vendor\*\* data \*\*link\*\* without establishing a call path through the networks to a called line when the customer entered signals include an order. . .

DETD(11) Input/output processor 121 buffers and sends the customer entered \*\*orders\*\* received from \*\*central\*\* control 118 to designated vendor equipment via one or more of a plurality of data communication channels, such as 157. . . terminates one end of data link 154 to vendor equipment 100. Data unit 123 modulates and sends the customer entered \*\*order\*\* to \*\*vendor\*\* data unit 124 at vendor equipment 100 which in turn demodulates and sends the \*\*order\*\* to \*\*vendor\*\* processor 125 via data communications channel 159.

DETD(14) \*\*Order\*\* entry arrangement 131 includes \*\*central\*\* processor 112 and a plurality of customer signal receivers such as 114 and 115. In response to a customer entered \*\*order\*\* entry request, \*\*central\*\* control 118 under the control of program instructions stored in program store 120 sends the customer entered order received from. . . customer entered information and storing the identity of the requesting line derived from call store translations information. In addition, the \*\*central\*\* control uses the \*\*order\*\* entry table also stored in call store 119 to process the order.

DETD(15) Depicted in FIGS. 4-6 is a flow diagram illustrating one implementation of the method of forwarding to a \*\*vendor\*\* data link a customer entered \*\*order\*\* received from a requesting customer line. This flow diagram depicts actions performed by a customer and steps performed by the. . . program store 120. For purposes of illustration, it is assumed that a customer at telephone 102 desires to place an \*\*order\*\* with cable television \*\*vendor\*\* equipment 100 to receive a desired program selection at television 106 via cable 152 and addressable converter 108. To request. . .

DETD(16) Connected . . . 102 enters an order entry request code such as "\*85" (block

403). Customer signal receiver 114 receives and sends the \*\*order\*\* entry request code to \*\*central\*\* processor 112 which collects the \*\*order\*\* entry request code in the temporary call register associated with the requesting line. \*\*Central\*\* processor 112 recognizes the "85" \*\*order\*\* entry request code as a special service request and halts normal call processing. The request code indicates to the processor. . . designated data link which carries the order and requesting line identification to the processing equipment of the desired cable TV \*\*vendor\*\*. Furthermore, additional or the same \*\*order\*\* entry codes with different \*\*vendor\*\* codes may be used to designate different order entry services such as ordering from a restaurant menu or perhaps ordering merchandise from a local retail department store. The order entry request code also alerts the \*\*central\*\* processor that a sequence of \*\*order\*\* entry digits is expected and not a sequence of digits associated with the directory number of a called customer line.

DETD(17) When the order entry arrangement forwards \*\*orders\*\* to several \*\*vendors\*\* providing the same type of service, the requesting customer must enter a vendor code to identify the desired vendor. This is initially indicated by the \*\*order\*\* entry request code. When indicated, \*\*central\*\* control 118 accesses translations information in call store 119 to obtain a list of valid vendor codes (block 404). When. . .

DETD(18) As indicated in block 501 of FIG. 5, the \*\*central\*\* processor next obtains \*\*order\*\* length, check digit (CD), and personal identification number (PIN) information for the identified \*\*vendor\*\* from the \*\*order\*\* entry information table in call store 119 (block 501). As previously mentioned, an illustrative order entry table is depicted in. . .

DETD(20) When . . . ("yes" leg of decision block 505) or a check digit is not required ("no" leg of decision block 503), the \*\*central\*\* processor determines from the \*\*order\*\* entry table whether the \*\*vendor\*\* requires the customer to enter a personal identification number (block 601 of FIG. 6). When required ("yes" leg of decision block 601), the customer then enters his or her personal identification number for providing the \*\*vendor\*\* with supplemental billing and \*\*order\*\* security information (block 602). After the personal identification number is received or when a personal identification number is not required. . . (CHAN) to the designated vendor data link (block 603). The central processor then forms an output message to the desired \*\*vendor\*\* equipment which includes the \*\*order\*\* information, the directory number of the requesting line, and any personal identification number (block 604). Central control 118 then sends. . .

DETD(21) Upon receiving the entered order information from the \*\*order\*\* entry system, \*\*vendor\*\* processor 125 addresses customer converter/decoder 108 via coaxial TV cable 152 to allow customer television 106 to receive the desired. . .

DETD(24) It is to be understood that the above-described method of and arrangement for forwarding to a \*\*vendor\*\* data link a customer entered \*\*order\*\* received from a requesting line is merely an illustrative embodiment of the principles of this invention and that numerous other. . . spirit and scope of this invention. In particular, this order entry arrangement may be utilized to serve any number of \*\*vendors\*\* for placing any kind of \*\*order\*\*. This can be implemented using various combinations of different \*\*order\*\* entry request and \*\*vendor\*\* codes that specify a particular type of service or product or one of a number of different vendors supplying the. . .

US PAT NO: 5,305,199 [IMAGE AVAILABLE] L22: 8 of 20  
DATE ISSUED: Apr. 19, 1994  
TITLE: Consumable supplies monitoring/ordering system for reprographic equipment  
US-CL-CURRENT: 705/28; 347/19; 399/24

**ABSTRACT:** A reprographic machine includes an inventory tracking system for monitoring consumable supplies. Usage data from a plurality of networked reprographic machines is supplied to a single tracking system for monitoring inventories of supplies consumed by the network. Automatic or semi-automatic ordering can be provided via a remote interactive communication system. Order confirmation, projected shipment dates and shipment confirmations can be provided from the reorder site. The system can provide inventory monitoring customized to a local network.

DETD(7) The . . . a remote communication capability, for example, via a remote interactive communication (RIC) system, so that information to and from a \*\*remote\*\* \*\*supplies\*\* \*\*ordering\*\* location can be effected. In this regard, the communication system module 26 includes a suitable printed wire board and associated. . . a modem 40 receives data from or provides data to the link 27b. Data from the network 28 comprises primarily \*\*orders\*\* for \*\*supplies\*\* consumed in the network 28. Information from the reorder site can comprise order confirmations, expected delivery dates and shipment confirmations. To enable such \*\*communication\*\* at the \*\*remote\*\* \*\*ordering\*\* site, a personal computer 42 with modem 40 is provided. The personal computer 42 drives a display, such as a . . .